

KPNA1 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab) Catalog # AP59090

Specification

KPNA1 Polyclonal Antibody - Product Information

Application IHC-P, IHC-F, IF, ICC, E

Primary Accession P52294

Reactivity
Host
Rat, Pig, Dog, Bovine
Rabbit

Clonality
Calculated MW
Physical State
Physical State
Rabbit
Rabb

Immunogen KLH conjugated synthetic peptide derived

from human SRP1-beta

Epitope Specificity 81-180/538

Purity

affinity purified by Protein A

Buffer 0.01M TBS (pH7.4) with 1% BSA, 0.02%

Proclin300 and 50% Glycerol.

SUBCELLULAR LOCATION Cytoplasm. Nucleus.

SIMILARITY Belongs to the importin alpha family.

Contains 10 ARM repeats. Contains 1 IBB

domain.

SUBUNIT Heterodimer; with KPNB1. Interacts with

ANP32E. Interacts with ZIC3 (By similarity).

Interacts with the nucleoprotein of

influenza A viruses. Binds to HCMV (human cytomegalovirus) UL84, HIV-1 Vpr and to ebolavirus VP24. Interacts with APEX1 and RAG1. Interacts with CTNNBL1 (via its

N-terminal). Interacts with AICDA (via its

NLS).

Post-translational modifications Polyubiquitinated in the presence of RAG1

(in vitro).

Important Note

This product as supplied is intended for research use only, not for use in human,

therapeutic or diagnostic applications.

Background Descriptions

The transport of molecules between the nucleus and the cytoplasm in eukaryotic cells is mediated by the nuclear pore complex (NPC), which consists of 60-100 proteins. Small molecules (up to 70 kD) can pass through the nuclear pore by nonselective diffusion while larger molecules are transported by an active process. The protein encoded by this gene belongs to the importin alpha family, and is involved in nuclear protein import. This protein interacts with the recombination activating gene 1 (RAG1) protein and is a putative substrate of the RAG1 ubiquitin ligase. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Nov 2012].

KPNA1 Polyclonal Antibody - Additional Information



Gene ID 3836

Other Names

Importin subunit alpha-5, Karyopherin subunit alpha-1, Nucleoprotein interactor 1, NPI-1, RAG cohort protein 2, SRP1-beta, Importin subunit alpha-5, N-terminally processed, KPNA1, RCH2

Target/Specificity

Expressed ubiquitously.

Dilution

IHC-P~~N/A<br \> <span class
="dilution_IHC-F">IHC-F~~N/A<br \> <span class
="dilution_IF">IF~~1:50~200<br \> ICC~~N/A<br \> E~~N/A

Storage

Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

KPNA1 Polyclonal Antibody - Protein Information

Name KPNA1

Synonyms RCH2

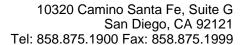
Function

Functions in nuclear protein import as an adapter protein for nuclear receptor KPNB1 (PubMed: 27713473, PubMed:7892216, PubMed:8692858). Binds specifically and directly to substrates containing either a simple or bipartite NLS motif (PubMed: 27713473, PubMed:7892216, PubMed:8692858). Docking of the importin/substrate complex to the nuclear pore complex (NPC) is mediated by KPNB1 through binding to nucleoporin FxFG repeats and the complex is subsequently translocated through the pore by an energy requiring, Ran-dependent mechanism (PubMed: 27713473, PubMed:7892216). At the nucleoplasmic side of the NPC, Ran binds to importin-beta and the three components separate and importin-alpha and -beta are re-exported from the nucleus to the cytoplasm where GTP hydrolysis releases Ran from importin (PubMed: 7892216). The directionality of nuclear import is thought to be conferred by an asymmetric distribution of the GTP- and GDP-bound forms of Ran between the cytoplasm and nucleus (PubMed: 7892216). Mediator of PR-DUB complex component BAP1 nuclear import; acts redundantly with KPNA2 and Transportin-1/TNPO1 (PubMed: 35446349).

Cellular Location Cytoplasm. Nucleus

Tissue Location

Expressed ubiquitously.





KPNA1 Polyclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KPNA1 Polyclonal Antibody - Images